CASTLEMAINE NATURALIST

FEBRUARY 1977

10

President: Mr R. Bradfield
Secretary: Mrs R. Mills
Treasurer: Mr L. Bransgrove
Newsletter: Mr E. Perkins.

Monthly meetings are held on the second Friday of each month at 8.00 p.m. at the Castlemaine Education Centre (SEC building, Mostyn St.). Visitors and prospective members are invited to attend the club's sessions.

ANOTHER FOR THE RECORD.... A NEW ONION ORCHID

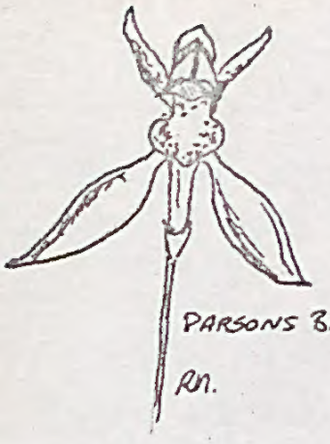
Discovery of Microtis biloba by Miss F. McIver.

The article "Orchids of the Castlemaine Area" by F. Taylor in Castlemaine Naturalist No 6, Sept 1976, listed orchids found within a 15 mile radius of Castlemaine during the past 10 years.

Another orchid, Microtis biloba, should now be added; to date it has been found at Muckleford (1975) and at Taradale (1976). This orchid bears a close resmblance to Microtis uniflora, which is widespread throughout this area with many well established

M. biloba grows to about 20-25 cm. high and the inflorescence is 4-5 cm long. Characteristic features that assist in identification relate to the colour of the labellum; the green colour of the whole plant has a yellowish tinge, and the labellum has a pale yellow crinkled irregular margin, terminates in two spreading lobes, and has a tiny hook on the back at the point where the two lobes join. The flowering period is approximately November to January.

F McI



Orchids of the Castlemaine District

Eriochilus cucullatus ..Parsons Bands
Number 5 of a series by Mrs R. Mills

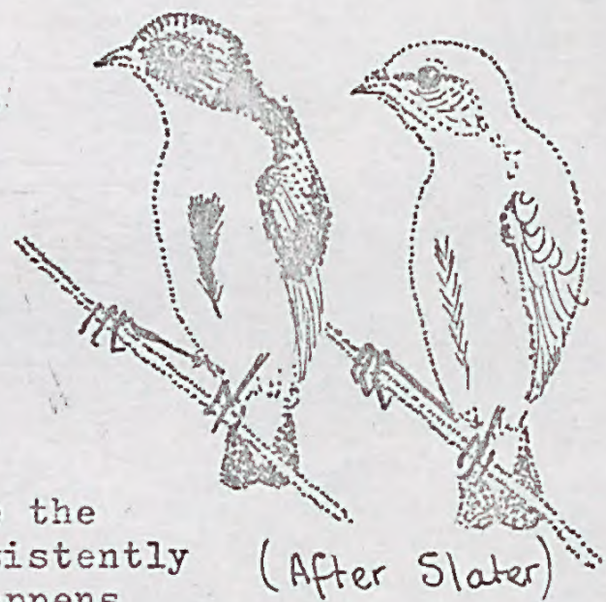
These orchids are quite small, being about 10-20 cm high. The solitary leaf is much reduced or absent during flowering.
The white (occasionally pink) lateral sepals are the largest and most spectacular part of the flower, which is very little more than 1 or 2 cm across. The labellum is pink, and slightly hairy to assist the entry of the insect during pollination. The cowl is uniquely formed so that the flower cannot be self-pollinated.

UPON MISTLETOE AND MISTLETOE BIRDS

by G. Sitch

The story of the mistletoe is the result of a partnership between the Mistletoe Bird and the plant. Mistletoe is a parasite which only grows on the branches of other plants-usually trees. The problem for the plant is to ensure that enough seeds will lodge in the branches of other trees and shrubs, there to take root and penetrate the host.

Many of the normal methods of seed dispersal would be wasted as mistletoe seeds which fall to the ground are lost. Even the method of dispersal via the digestive organs of birds and mammals would be of no avail were it not for special characteristics of the Mistletoe Bird.


(After Slater)

Several species of birds feed on Mistletoe berries, but the most enthusiastic of all is the little scarlet and blue-black Mistletoe Bird (Diaceum hirundinaceum) and his plainer grey with faintly red under the tail coverts mate. Apparently these birds are the one Australian Bird whose droppings consistently lodge on the branch on which the bird happens to be perched.

Mistletoe is often regarded as an eyesore and a curse. This is more likely to be the result of prejudice against parasites. Both the parasite and the host trees are native to Australia and so have co-existed for many centuries without apparent detriment to forests. It was only on the arrival of white man that deterioration began.

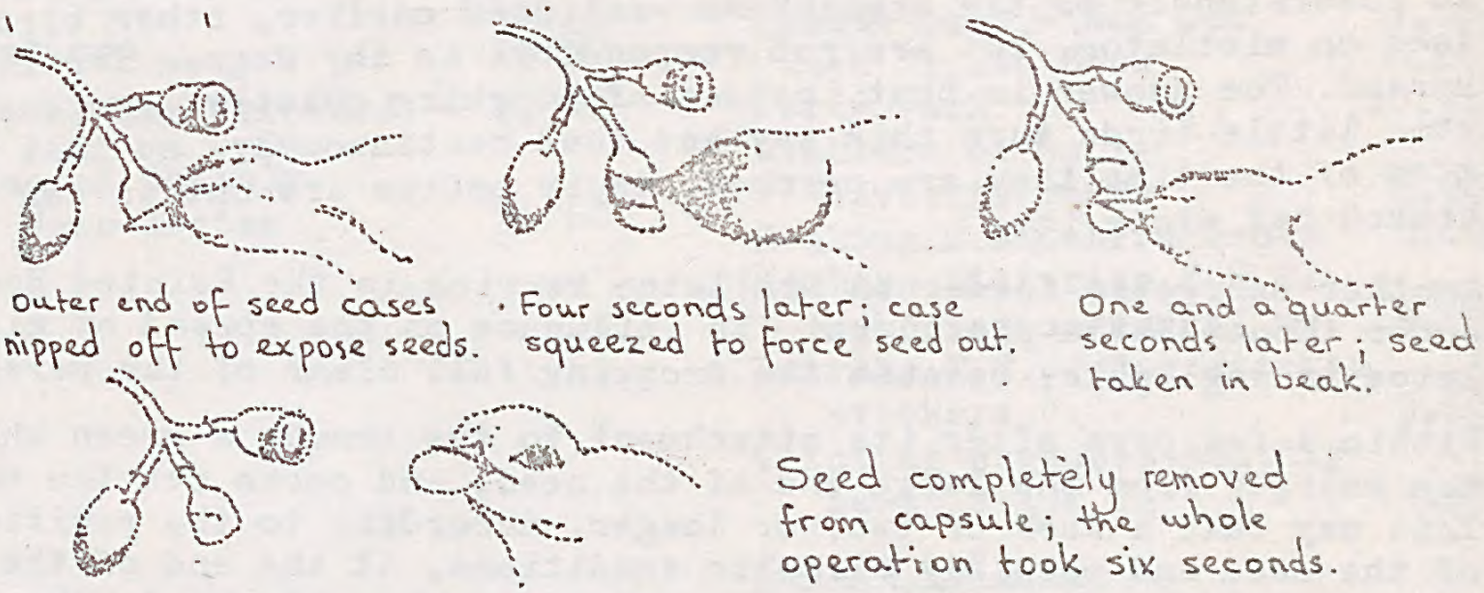
Neither is mistletoe unattractive in appearance. The leaves are

symmetrical and graceful, while the honey-suckle type flowers are distinctly ornamental.

When firmly established, at about 4 or 5 years old, the mistletoe produces masses of flowers over a considerable period of the year. The berries each contain one hard seed thickly covered with a white sticky substance, sweet and palatable. It is this covering which is the food of the mistletoe birds. Due to the long flowering period berries are available over several months.

Nesting The Mistletoe bird nests when the first berries ripen, and may sometimes rear three broods in a season. The nest is made of clinging fibre and cobweb, felted together to hang like a purse from a horizontal twig. Apparently the female builds the nest unaided. The eggs are white and very small. The eggs hatch after about 10 days incubation by the female. At this stage the male becomes busy. At first the young are fed on insects, but after a few days mistletoe berries become the main item.

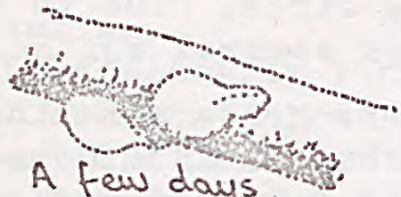
Gathering Seed To gather the seed the bird first nips off the outer end of the leathery case. The remaining cup-shaped portion is squeezed in the beak so that the sticky seed is forced partly out and is easily available to be extracted by a third movement. The hard seeds pass through the bird's digestive system without harm, much of the sticky covering being absorbed, but not all.


Outer end of seed cases nipped off to expose seeds.
Four seconds later; case squeezed to force seed out.
One and a quarter seconds later; seed taken in beak.
Seed completely removed from capsule; the whole operation took six seconds.

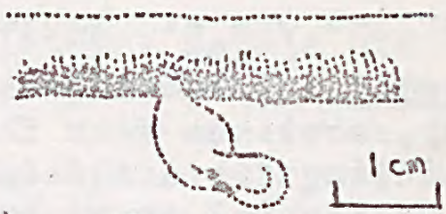
It is during the nesting activities that most of the successful distribution of seeds takes place. When nesting is completed the birds spend most of their time in the mistletoe itself, so that few droppings find their way to other trees. During the nesting season, however, the adults perch habitually on trees near the nest. This is especially noticeable with regard to the tree which by habit is used as a lookout post. By the time the young have left the nest, it may have received dozens of seeds on its smaller branches. Many are deposited on dry twigs, the most popular perches, but quite a number

will be deposited on growing branches. Even in the latter case successful growths will be curtailed because only one plant can survive on each limb. The outer plants are quickly deprived of sap by the growth nearest to the trunk. In normal circumstances the chance of of mistletoes actually destroying the tree is slight indeed, as only growth beyond the mistletoe dies.

Two seeds just voided on branch; shoots will emerge from dark portion.

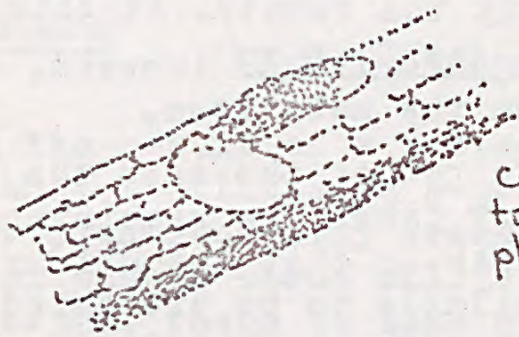


A few days later; emerging shoot has reached bark.



Shoot which emerged at an arkward angle; is turning toward bark.

Shoot has made contact with the bark and pad at the tip has become firmly attached



Shoot may travel considerable distance to find a suitable place for attachment.

Spreading the Seed Why do the droppings of the Mistletoe Bird lodge so consistently on the branch? As memtioned earlier, other birds feed on mistletoe, but are not responsible to any degree for its spread. The answer is that instead of perching quietly, the energetic little birds turn this way and that continuously, so that for much of the time they are perched, their bodies are not across the branch but along it.

Another energetic feeder on Mistletoe berries is the Painted Honeyeater (Conopophila picta) but its influence on the spread of mistletoe is negligble, because the dropping fall clear of the perch.

Within a few days after its attachment to the branch a green shoot has emerged from the large end of the seed, and seeks out the bark. This may take a week or two, or longer, according to the position of the seed and possibly climatic conditions. At the end of the shoot a small flattened pad develops and this attaches itself to the bark. At the same time a clear fluid is exuded from the shoot, cementing the pad firmly into position. The seed is able to maintain the growth of the shoot for a considerable time. This is apparent when the seed has lodged on a dry branch. For several weeks the fight for life may go on, the shoot seeking vainly to establish contact with the life-giving sap.

Examination of sprouted seeds indicates some chemical action which dissolves the bark of the host and so allows the mistletoe to reach

the sap underneath. The bark directly beneath the attached pad is in a semi-liquid state. This penetrating and absorbing growth is known as the haustorium.
With the penetration of the bark it is not long before tiny leaves appear and a new mistletoe plant is born. From this point progress is slow, presumably while the root system is being established under the bark. At the end of two years there may be still only a few leaves showing and it would appear that few plants produce flowers or fruit within four or five years.

It would seen that the menace of mistletoe is much exaggerated. Indeed it is difficult to understand how the parasite can do any harm at all. There must be a million trees destroyed by human agency for each one actually killed by mistletoe.

G. Sitch.

References

Wild Life Aug 1948; Wild Australia M.K. Morcombe; A Field Guide to Australian Birds, Peter Slater; A Handbook to Plants In Victoria, J.H. Willis.

The article first appeared in the Bendigo Region Society for Growing Austarlian Plants newsletter, Oct 1976)

Statement of Receipts and Expenditure As at 31-12-76

Receipts		Expenditure	
Subscriptions	$ 121.00	Account book -Hon Treas	$ 2.28
Donations	6.00	Minute book - Hon Sec	4.80
Sale of Car Stickers	2.40	Rough Minute Book	0.60
Sales of Monthly News-letter	3.60	Petty Cash	10.00
		Castlemaine Mail-advertisements	6.90
		Geelong F.N.C-bird books	5.00
		Western Victorian F.N.C. association-annual sub	5.00
		Latrobe F.N.C.-car sticker stickers	9.60
		Printing expenses-monthly news letter	14.60
		Credit balance	
		Cash in bank $73.80	
		Cash in Hand 0.42	74.22
	$ 133.00		$ 133.00

Advertisement

10 000 Sweet Briar Plants for Sale Apply to H. Sutcliffe, Eagle Tavern, Campbells Creek

From Mt Alexander Mail 18 June 1858 (contributed by R Bradfield)

Meet the Birds in Your Garden ... Number 3 of a series by R. Wallace. Reprinted from Bendigo SGAP newsletter,

THE RUFOUS WHISTLER In the still, lazy, energy sapping heat of a midsummer's day the silence is oft broken by the bold, cheerful song of the Rufous Whistler, uttered from the dense foliage of tree or bush. Father Hartigan, in his splendid book of verse "Around the Boree Log" described the cheery birds' song far better than I could ever hope to do-

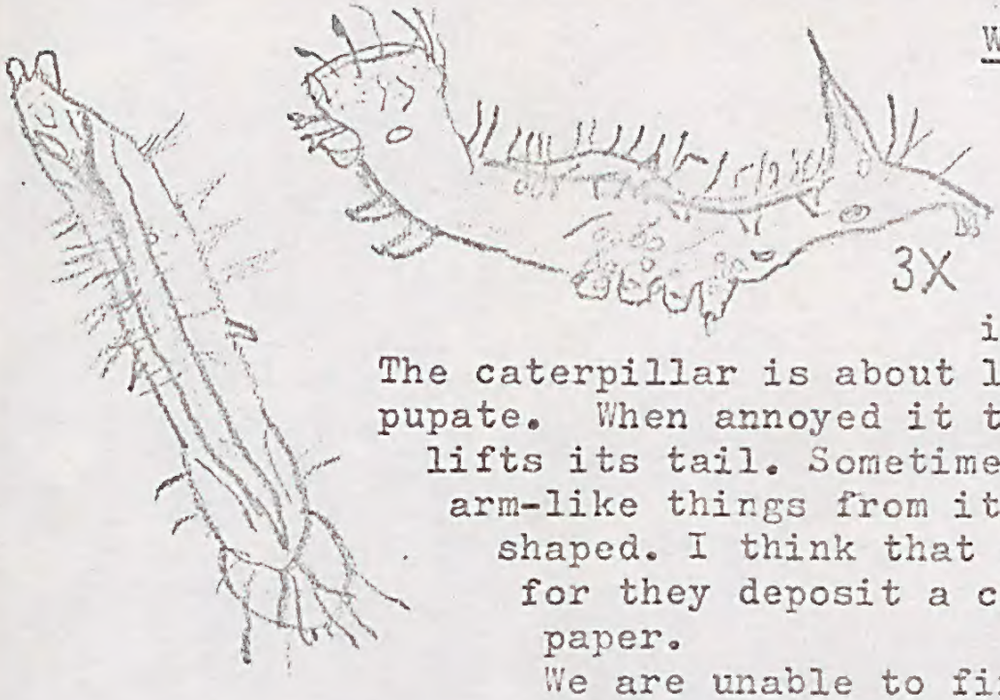
"One voice the outer spaces filled-
That lilting lay the wiree trilled,
Like rapture of a lover,
"Wir-ree, Wir-ree, Itchong, Itchong"-
Then rippled through its liquid song,
Leaf hidden in the cover"

Known by a large number of common or vervacular names, the Rufous Whistler is also known as the Ring Coachman, Wiree, Rufous-breasted Whistler, Rufous-breasted Thickhead, Thunderbird, Echong and Little-thrush. Known as the Thunderbird because of the habit of bursting into song at the report of a gun, the rumble of thunder or the passing of a motor truck; any loud noise will trigger off a tirade of silver song. He is garbed as follows - Grey upper parts with a darker head, a glistening white bib outlined with a contrasting black band. The underparts are chestnut red, grey-brown under the tail. The richness of the chestnut underparts varies greatly in different individuals. In Bendigo gardens the birds appear in mid-spring and build their flimsy nests of thin twigs in any handy thick bush and the flat nest will hold two olive eggs and slightly spotted at the larger end.

In March before they leave us again to return next spring there is a revival in the glorious song which sees the female as active as the male vocally, a little dowdy sprite with her grey streaked breast she is a Melba nevertheless. In years gone by the whole of the Whistler family languished under the name of Thickhead. This was due to the trouble the early taxidermists had in prparing the skins, when they were hampered by the birds relatively large head.

Plentiful insect life will pay the piper if he visits your garden as he is entirely insectivorous. Common and robust, the Rufous Whistler can be seen in a lot of Bendigo Gardens in the warmer months. Another one of our smaller birds, can you possibly overlook him? I should think not.

THIS MONTH'S EMBLEM is one of 8 drawn by Geoff Sitch. It is the Green-Comb Spider Orchid (Caladenia dilatata)



WHAT CATERPILLAR IS THIS?

be Merrilyn Mills.

This caterpillar was found at North Castlemain on a black wattle. The color varies from a greyish-mauve to a rich scarlet The caterpillar is about 10 cm long when ready to pupate. When annoyed it thrusts back its head and lifts its tail. Sometimes it produces two maroon arm-like things from its chest - these are Y shaped. I think that they are stinging devices, for they deposit a clear fluid on a piece of paper.

We are unable to find a name for this specimen, and would be grateful for any further information, especially for its name. A similar caterpillar is illustrated in "Australia's Insects"(Australian Nature Library), except that it is the wrong color.

Plants of the Castlemaine District No 6 of a series

LEMON BEAUTY HEADS.... Calocephalus citreus

Lemon-beauty heads are an interesting feature of the summer bushland.

It is found in patches in the local forest area, e.g in the Muckleford forest and in Kalimna Park.

A close look at the flowers with a magnifier is worth while. As with billy-buttons, the heads are compound. The tiny clusters of tiny flowers are surrounded and hidden by yellow bracts; these are in turn grouped into oval heads. Billy buttons however differ in having chaffy scales between the tiny flowers.

A magnifier shows too that the stems and leaves are covered with a fine wool.

The common name is a translation- calocephalus means beautiful head, and citreus refers to the colour of the flowers.

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THE FIRST TEN ISSUES. In the first 10 issues of this magazine we have had 18 different contibutors; 16 of these are club members. Further items about any aspect of nature would be very welcome.

CALLING PHOTOGRAPHERS

The Castlemaine Mail is interested in publishing suitable nature photographs. Photographs should be black-and white, of suitable size.

Club Program

February Meeting Frid Feb 11th
This is the annual meeting.
Speaker: Mr G. Sitch
Subject: Propagation of native plants.

March Meeting Friday March 11
Subject: Astronomy

April Meeting. Frid April 15
This is the 3rd Friday-second Frid is Good Friday.
Speaker: Mr R. Bradfield
Subject: Aborigines of the Castlemaine District.

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NOTES FROM THE COMMITTEE

Annual Meeting
Office bearers maximum term is normally 2 years; hence all are eligible for re-election.
Present officers are:-
Pres: Mr . Bradfield
V.Pres Mr G. Broadway,Mr G Sitch
Sec: Mrs R. Mills
Treas: Mr L. Bransgrove.
Committee: Mr & Mrs M Winterbottom, Mr F. Meyer, Miss J. Chapman, Mr E. Perkins.

Excursions

Saturday Feb 12 Kaweka Wild.-flower sanctuary.
Leader: Mr Broadway
Meet corner Turner & Hargreaves street at 1.30 pm.

Friday March 18th Evening.
Astronomy through Binoculars.
An 8 inch and 4 inch reflector telescope will also be in use.
Meet Education Centre at 7.30, for for travel to Mr Bradfields, Vaughan. Or meet there at 8 p.m.

Evening will not be held if cloudy. If in doubt, ring 734 294.

Sunday April 17 Vaughan District.
A walking excursion.Leave the Education Centre at 10.00 am
Leader: Mr Bradfield.

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ANNUAL MAGAZINE

The Castlemaine Naturalist Annual is printed; each member will receive a copy free, as will loc local schools and libraries. Copies will be on sale to the public - price $1.

A FLYING POISON PILL

Australia's best-known butterfly, the Wanderer, is something of a wolf in sheep's clothing, according to a world authority on the species, CSIRO scientist Dr. John Edgar.

Not only is the butterfly beautiful, it is also a flying capsule of poisons which can be fatal to birds, one of the butterfly's natural enemies.

Dr. Edgar's work on butterflies is part of a research program being held by the CSIRO Division of Animal Health in Melbourne.

The Wanderer, or Monarch as it is sometimes called, is easily recognised by its orange wings, the black veins which dissect them, and the tiny white spots on its black body.

"Female Wanderers are strongly attracted to, and often lay their eggs on, a common plant known as the Swan Plant which contains heart poisons called cardiac glycosides," Dr. Edgar said.

"These plants are usually avoided by animal life.

"When the eggs hatch, the young caterpillar feeds upon the plant thereby absorbing its deadly poisons.

"When the caterpillar develops into a butterfly the poisons remain in its system.

"However, if a caterpillar feeds and grows on non - poisonous plants, as sometimes happens, it may choose — as a butterfly — to feed on various plants which enable it to stockpile equally lethal liver poisons.

"Each butterfly can store enough heart or liver poisons to make a bird vomit or even die if the insect is eaten.

"Nature seems to have warned the Wanderer's enemies that its bright colors identify it as an unpalatable and dangerous butterfly.

Contributed by Miss J Chapman